Amendments to the Drawings:

The attached three (3) sheets of drawings include changes to Fig. 1, 3 and 4. These three (3) sheets, which include Fig. 1, 3 and 4, replace the original sheets including Fig 1, 3 and 4. In Figs. 1, 3 and 4, descriptive labels have been provided for the various boxes.

Attachments: Three (3) Replacement Sheets

REMARKS

Introduction

Claims 11 through 20 are currently pending and rejected in this application. Claims 11, 12, 15, 18 and 19 have been amended. In view of the explanations set forth below, Applicants submit that pending claims 11 through 20 are in condition for allowance.

Claim Objections

In response to the Examiner's objections to claims 11, 12, 15 and 19, Applicants have made appropriate corrections in accordance with the Examiner's suggestions. In addition, claim 18 has been amended to correct a typographical error.

Title of the Invention

The title of the invention has been amended in response to the Examiner' comments.

Drawings

In response to the Examiner's objection to the drawings, Figs. 1, 3 and 4 have been amended to incorporate descriptive labels for the various boxes. No new matter has been added by these amendments.

Substance of the Interview

Applicants appreciate the courtesies extended by Examiner Samir Wadie Rizk and Primary Examiner Shelly Chase during a telephonic interview held on April 2, 2008, with Mr. Chad Zhong (Reg. No. 58,270) of Kenyon & Kenyon LLP, in which interview the rejections and the Smelser reference cited in the present Office Action were discussed. The comments that are presented below correspond to the comments presented at the interview, during which the Examiner agreed that current claims 11 and 20 appear to overcome the prior art rejection. For the reasons that follow, it is believed that this application is in condition for allowance.

Claim Rejection under 35 U.S.C. §101

Claim 18 is rejected under 35 U.S.C. § 101 as being directed to non-statutory subject

matter. Applicants submit that this rejection should be withdrawn for at least the following reasons.

Claim 18 recites, in relevant parts, "the method is carried out via a computer program executable on one of a computing unit and a control unit corresponding to a processing unit." Applicants respectfully submit that computer-readable program code embodied in computer-readable media is clearly statutory subject matter pursuant to MPEP § 2106.02, i.e., "computer-readable medium encoded with a computer program is a computer element which defines structural and functional interrelationships between the computer program and the rest of the computer which permit the computer program's functionality to be realized, and is thus statutory." In the present case, "one of a computing unit and a control unit corresponding to a processing unit" encompasses a tangible hardware medium as clearly explained in the specification. In addition, claim 18 is clearly not directed to a computer program, per se; instead, it is directed to a method which is carried out via a computer program that is executed on a tangible medium, e.g., on one of a computing unit and a control unit corresponding to a processing unit.

For at least these reasons, Applicants submit that claim 18 is directed to a statutory subject matter, and Applicants respectfully request withdraw of the rejection under 35 U.S.C. § 101.

Claim Rejections 35 U.S.C. §102(b)

Claims 11 through 20 are rejected under 35 U.S.C. 102(b) as being allegedly anticipated by U.S. Patent No. 4,782,487 to Smelser ("Smelser"). Applicants respectfully traverse these rejections for at least the reasons presented below.

As regards the anticipation rejections of the claims, to reject a claim under 35 U.S.C. § 102(b), the Office must demonstrate that each and every claim feature is identically described or contained in a single prior art reference. (See *Scripps Clinic & Research Foundation v. Genentech, Inc.*, 18 U.S.P.Q.2d 1001, 1010 (Fed. Cir. 1991)). Still further, not only must each of the claim features be identically described, an anticipatory reference must also enable a person having ordinary skill in the art to practice the claimed invention, namely

the claimed subject matter of the claims, as discussed herein. (*See Akzo, N.V. v. U.S.I.T.C.*, 1 U.S.P.Q.2d 1241, 1245 (Fed. Cir. 1986)). As further regards the anticipation rejections, to the extent that the Office Action may be relying on the inherency doctrine, it is respectfully submitted that to rely on inherency, the Office must provide a "basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristics *necessarily* flows from the teachings of the applied art." (*See* M.P.E.P. § 2112; emphasis in original; and *see Ex parte Levy*, 17 U.S.P.Q.2d 1461, 1464 (Bd. Pat. App. & Int'f. 1990)). Thus, the M.P.E.P. and the case law make clear that simply because a certain result or characteristic may occur in the prior art does not establish the inherency of that result or characteristic. Accordingly, it is respectfully submitted that any anticipation rejection premised on the inherency doctrine is not sustainable absent the foregoing conditions.

Independent claims 11 and 20 recite, in relevant parts, "forming, according to a specifiable signature formation method, a first signature as a function of the data to be transmitted; transmitting in messages the first signature together with the data; forming a second signature according to the specifiable signature formation method as a function of the transmitted data; comparing the first signature with the second signature; inverting the data to be transmitted; forming the first signature according to the specifiable signature formation method as a function of the data to be transmitted and of the inverted data; transmitting the first signature and the data; inverting the transmitted data; forming the second signature according to the specifiable signature formation method as a function of the inverted transmitted data and the transmitted data; and comparing the first signature with the second signature." As can be seen from above, both the "first signature" and the "second signature" are formed according to the same "specifiable signature formation method." Applicants respectfully submit that Smelser clearly fails to teach or suggest the above-recited features, as explained in detail below.

Smelser discloses a method and apparatus for memory testing. In particular, a first pattern of data is written into the memory in a pseudo-random address sequence determined by an address generator. The first pattern is read from the memory and checked for any error. A second pattern that is the complement of the first pattern is written into the memory in a pseudo-random address sequence determined by the address generator. The second pattern is read from the memory and checked for any errors. A third pattern of data is written into the

memory in the pseudo-random address sequence determined by the address generator. The third pattern of data has the effect of complementing respective check bits which are the same for the first pattern of data and the second pattern of data. The third pattern is read from memory and checked for any error.

As discussed during the interview on April 2, 2008, Smelser fails to disclose forming a first signature and a second signature according to the same specifiable signature formation method, the second signature being formed as a function of the transmitted data. Throughout the Office Action, the Examiner makes the following interpretation: "data words" of Smelser as being equivalent to the claimed data to be transmitted or transmitted data; "check bits" of Smelser as being equivalent to the claimed first signature; and "syndrome" of Smelser as being equivalent to the claimed second signature. (Office Action, p. 4). However, this asserted equivalence is clearly incorrect: the claimed first signature and the second signature are formulated "according to a specifiable signature formation method," but the alleged equivalents of the first signature (check bits) and the second signature (syndrome) as disclosed in Smelser are not formulated according to the same specifiable signature confirmation method. Specifically, each bit of the set of "check bits" of Smelser is generated by an exclusive-OR operation between certain data word bits determined by ECC. The data word bit positions so associated with the "ones" in the column of interest become the pertinent bit positions. A check bit is generated by an exclusive-OR operation between the data in the pertinent bit positions of the data word. *Smelser, Col. 7, lines 45 through 57.* By contrast, the "syndrome" is generated by performing an exclusive-OR logical operation between corresponding bits of each set of check bits inputted into the exclusive-OR circuitry. *Smelser, Col. 7, line 67 through Col. 8, line 3.* Accordingly, since Smelser discloses using two separate and distinct methods of forming "check bits" (alleged first signature) and "syndrome" (alleged second signature), Smelser clearly fails to disclose that both the first signature and the second signature are formulated according to the same "specifiable signature formation method."

Independent of the above, the syndrome is not generated as a function of data, much less as a function of the transmitted data; instead, the "syndrome," which the Examiner asserts as being equivalent to the claimed second signature, is generated as a function of the

check bits. *Smelser, Col. 7, line 67 through Col. 8, line 3.* Therefore, Smelser fails to disclose forming a second signature according to the specifiable signature formation method as a function of the transmitted data.

Independent of the above, Smelser fails to disclose comparing the first signature with the second signature. As mentioned above, the first signature (corresponding to the check bits generated for the original data word) is generated for the original data words (see, e.g., col. 5, l. 64-66, Smelser), and the second signature is generated for the complemented data words (see, e.g., col. 6, l. 45-46, Smelser). This means that even if no errors can be detected in the memory 16, the first signature would certainly be different from the second signature, and a comparison of the first signature with the second signature would make no sense. For this logical reason, Smelser does not suggest a comparison of the first signature with the second signature. As disclosed in Smelser, at step 188, the ECC circuitry 24 provides a syndrome for the data word and check bits read from the DRAM 16. Decode circuitry 30 then decodes the syndrome produced by ECC circuitry 24. If the syndrome decoded by decode 30 indicates the presence and location of a correctable error in the data, then corrector 26 corrects the bit of the data that is in error. *Smelser, Col. 6, lines 21 through 28.* The same process is performed independently for the complemented data words and the appropriate check bits (see, e.g., col. 6, l. 47-48, Smelser). At best, Smelser discloses an independent analysis of the syndrome by itself through decoding the syndrome, and the decoded data indicates the location and presence of error(s) in the data. Analysis of potential error takes place separately and apart from data and its check bits. Specifically, the decoded syndrome indicates the presence and location of the correctable error in the data; then, the corrector 26, which is a separate and independent entity from the syndrome, corrects the bit of the data that is in error. Smelser clearly fails to disclose any comparison between the data word and the syndrome itself, let alone comparing the first signature with the second signature.

Moreover, Smelser further fails to disclose forming the second signature according to the specifiable signature formation method as a function of the inverted transmitted data and the transmitted data. In particular, Smelser's generation of a syndrome is, at best, through an exclusive-OR logical operation between corresponding bits of each set of check bits inputted into the exclusive-OR circuitry. *Smelser, Col. 7, line 67 through Col. 8, line 3.* Significantly,

Smelser is silent on forming the second signature as a function of the inverted transmitted data and the transmitted data. In fact, Smelser does not even mention utilization of "data" in forming the syndrome, much less a function of the inverted transmitted data and the transmitted data. Accordingly, Smelser fails to disclose forming the second signature according to the specifiable signature formation method as a function of the inverted transmitted data and the transmitted data.

For at least the foregoing reasons, Applicants respectfully submit that Smelser fails to describe or suggest the features recited in independent claims 11 and 20. Claims 12 through 19 depend from claims 11 above, and therefore include all the features of claim 11. Applicants, therefore, respectfully submit that these dependent claims, too, are patentably distinguishable over these references. Applicants respectfully request withdrawal of the anticipation rejection.

CONCLUSION

In light of the foregoing, Applicants respectfully submit that all pending claims 11 through 20 are in condition for allowance. Should the Examiner not agree, then a personal or telephonic interview is respectfully requested to discuss any remaining issues and expedite the eventual allowance of this application.

Respectfully submitted,

KENYON & KENYON LLP

(R. No. 36,197)

Dated: June 27, 2008

By: Song H. Lee for Gerard Messina

Gerard A. Messina
Reg. No. 35,952
One Broadway
New York, NY 10004
(212) 425-7200
CUSTOMER NO. **26646**